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*Dissertation*

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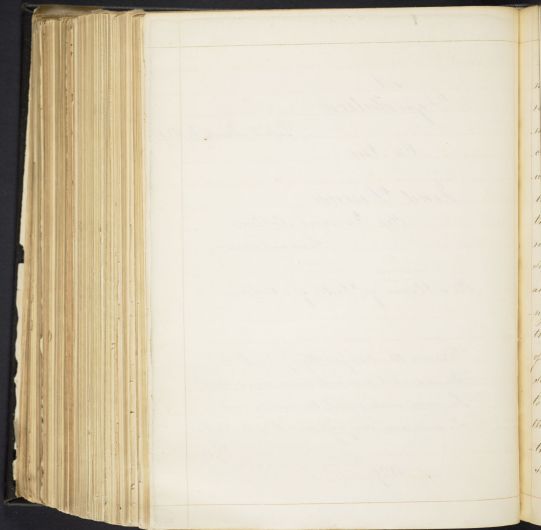
*Lead Disease*

By Thomas Primmer

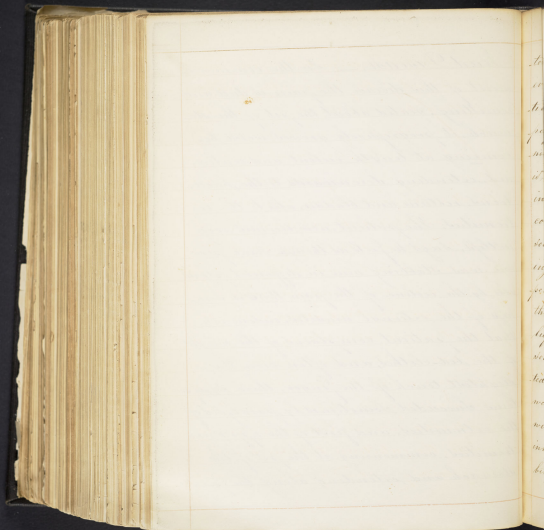
Pennsylvania.

Is a Treatise of Doctor of Medicine

Whoever thinks a faultless piece to see,  
Thinks what never was, nor is, nor ever shall be;  
In every work, regard the writers end,  
For none can compass more than they intend.  
1829 Can they compass as much as  
D. P. C.

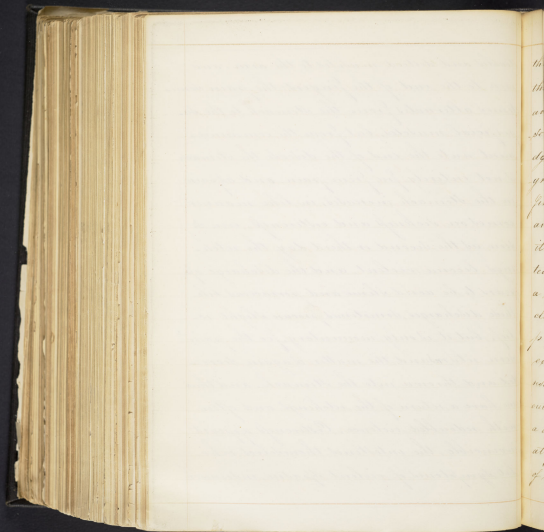


Sev. Disease. — In the commence-  
ment of this disease the pain is dull and  
remitting, seated about the pit of the sto-  
mach, it progressively grew worse be-  
coming at length violent and contin-  
ued, extending downwards to the back,  
loins, rectum and bladder, also to the ex-  
tremities. The patient now became very  
restless, says he felt as though some per-  
son was stabbing him in different places,  
also by the violence of the pain there is sore-  
ness of the external muscles, inasmuch  
that the patient complains of the weight  
of the bed-clothes, and often even the  
slightest touch of the finger, these symp-  
toms succeeded sometimes by paralysis of  
the extremities, and first of the upper ex-  
tremities, commencing at the pit of the  
stomach and extending along the rec-

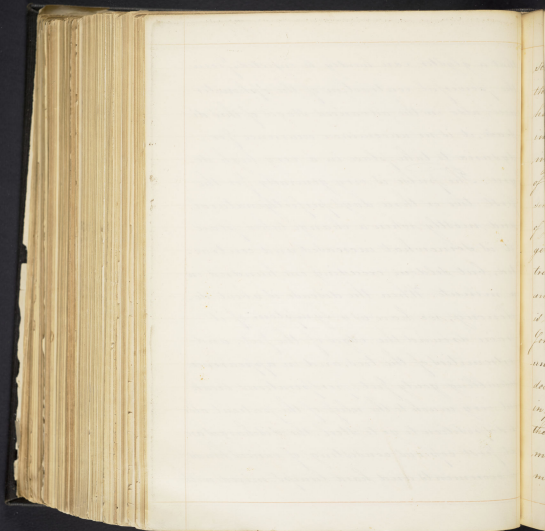




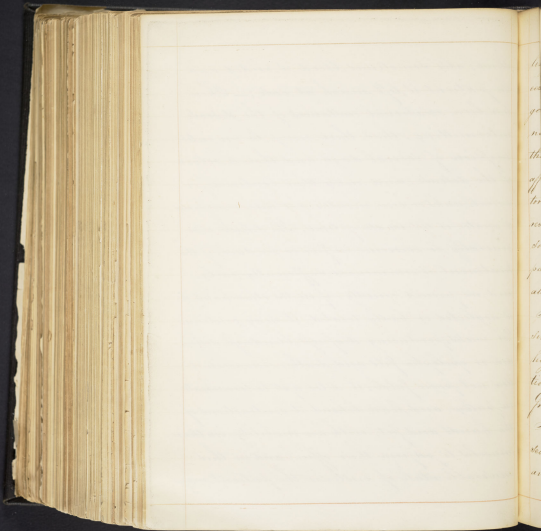
teralis and deltoid muscles to the arm, and  
 even to the end of the fingers: the pain some-  
 times alternates from the Stomach to the sa-  
 raphical muscles, but from the commence-  
 ment unto the end of the disease the Stomach  
 is not entirely free from pain, and as pain  
 in the Stomach increases, in like manner  
 comes on sickness and costiveness, even so  
 soon as the second or third day the retch-  
 ings become violent, and the discharge ap-  
 pears to be acid slime and ferraceous bile,  
 these discharges sometimes procure slight re-  
 lief, but it is only momentary, for the pain  
 soon returns and the matter is again secre-  
 ted and thrown into the Stomach, and then  
 we have a return of the retchings, and often  
 with redoubled violence; Costiveness appears  
 invincible, the intestines themselves exhib-  
 it symptoms of violent spasm, inasmuch



that a glyster can hardly be injected, from  
the powerful contraction of the sphincter  
ani, also in the advanced stages of this di-  
sease, it is no uncommon occurrence for  
dysuria to take place in a very high de-  
gree; The pulse is very generally for the  
first two or three days perfectly natural,  
and mostly when a change takes place  
it is somewhat increased and contrac-  
ted, but seldom exceeding one hundred in  
a minute. When the disease is about de-  
clining, we have as a symptom of it  
pain around the edges of the feet, and  
extremities of the toes, and in appearance  
resembling gouty feet, perspirations break  
out very much to the relief of the patient, also  
a disposition to go to stool, the discharges are  
at first copious, consisting of various kinds  
of excrements and hard lumps, mixed with



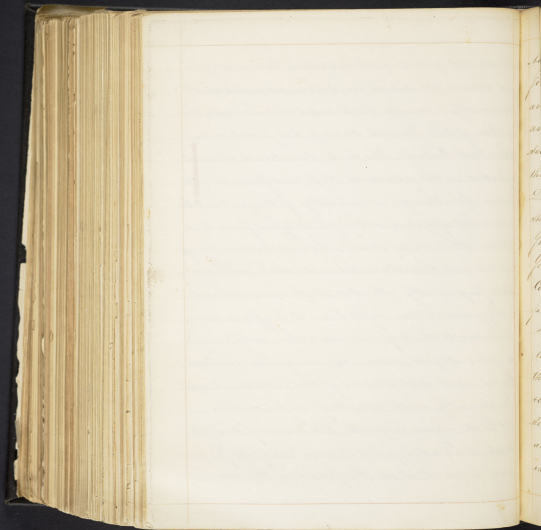
time; also sometimes, blood is voided and the patient is left much at ease;— There has been occasional instances of the disease intermitting; thus, there may be an intermission of several days and then a return of the disease, and may thus continue for several weeks or even months, but with symptoms of greater or less length of time. The disease can generally be overcome in five or six days, if the treatment is commenced sufficiently early, and we proceed correctly, if on the other hand it is neglected or badly treated, it may continue for weeks, producing deafness, blindness, delirium or epileptic fits and death, even when it does not prove fatal, it is too apt to terminate in palsy, and leave behind it contractions of the hands and feet, with an inability in their muscles to perform their office, and in this miserable state of existence the patient may



linger out many wretched years, these con-  
 sidered the disease in warm climates most  
 generally; many such cases came under the  
 notice of Dr Thomas during his practice in  
 the West Indies. The brain sometimes becomes  
 affected in the advanced stage and from the ster-  
 torous breathing, insensibility of the patient &c.  
 resembles apoplexy, although it differs from it in  
 some other symptoms, the countenance being  
 pallid and the extremities cold, these cases are  
 also frequently attended with convulsions.

Appearances on dissection, it is affirmed, are  
 similar to those of common colic, only in a  
 higher degree; namely, irregular contrac-  
 tions and distensions of the intestines, and  
 frequently with marks of inflammation.

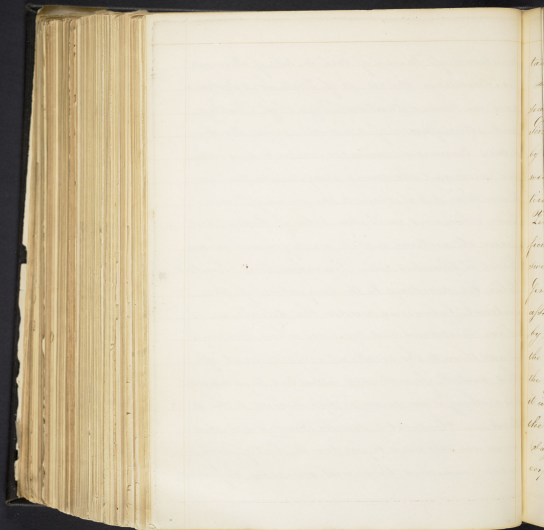
As its name imports, the cause of this di-  
 sease is Lead applied in some one of its forms,  
 and hence it is mostly found in the north-



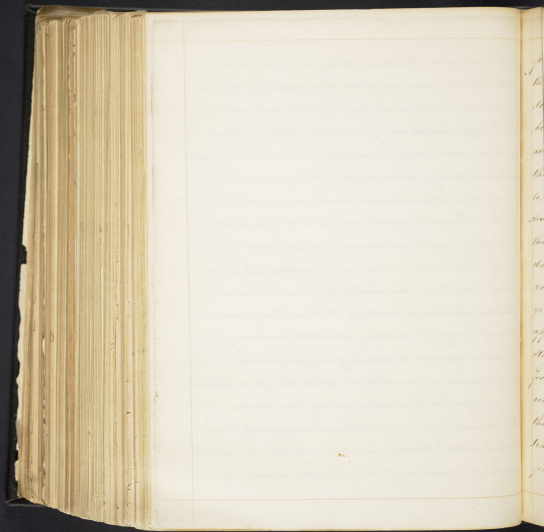


furhood of 'minerals of this metal, of Furnaces  
for smelting the ore, or of White Lead factories,  
and in those situations Legs, Pigs, Poultry,  
and other species of animals, evince the dis-  
ease; Numerous names have arisen to designate  
this severe and alarming complaint, that in  
Devonshire it has obtained the name of Green-  
shire colic, and in Bristol, Colic of Bristol, but  
from its victims a still more general name  
for it at Painters Colic, Plumbers Colic, Painters  
Colic &c. according to the occupation of the  
patient labouring under the disease.—

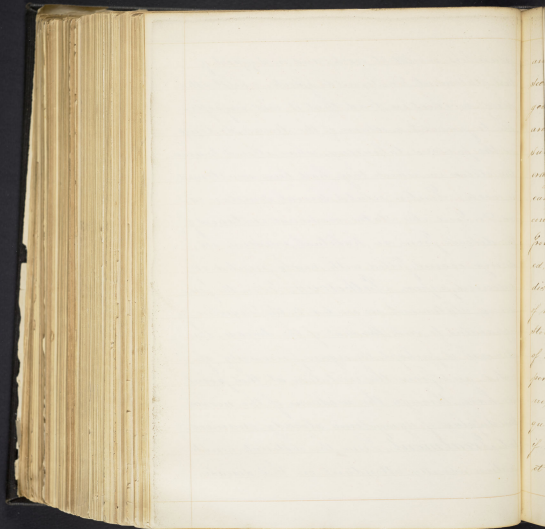
Third, Mechanics and labourers whose business  
leads them to the constant employment of  
this metal, if not very attentive to personal  
cleanliness are more or less subject to the dis-  
ease.— Stimulated drinks, Cold winds and  
wounds are also said to produce it, but if accu-  
rately examined they will generally be found







plumbers whilst at work; and in support of  
this statement Dr. Piquet's asserts, whilst atten-  
ding workers in lead, that it was impossi-  
ble to prevent a return of the disease, so long  
as the persons labouring, whose allment to wear  
the clothes in which they had been accustomed  
to work; Gentin related several similar ca-  
ses; Dr. Good also states occasional instances of  
the disease from an habitual residence in  
damp rooms, filled with newly printed or  
coloured paper. Pathology. From the for-  
going statement we are led to the Digestive  
apparatus to seek the seat of the disease, the  
stomach is, perhaps, the organ primarily af-  
fected, and from the irritation at this point  
we have, through the medium of the nerves  
the display of symptoms already enume-  
rated. Treatment. From the obstinate consti-  
pation usually attendant on this disease,

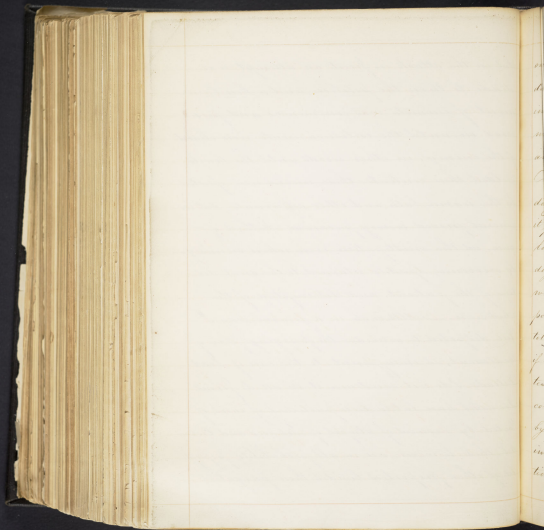


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and the violent colic symptoms, it would  
seem that the first indication should be to  
get the bowels open as speedily as possible;  
and until within a few years it was upon  
such views that the practice of physicians gen-  
erally was founded; As vomiting was an  
early symptom, an emetic was prescribed at the  
commencement of the disease, to free the stomach  
from the acrid slime which it usually contain-  
ed, and which was considered the focus of the  
disease, but which in all probability consisted  
of nothing more than the natural juices of the  
stomach imperfectly elaborated, in consequence  
of the secretory vessels being deprived of the pro-  
per degree of healthy nervous influence; the  
next precept was to administer cathartics fre-  
quently, in powerful and repeated doses, as  
if they meant to overcome the obstruction by  
it arising and then failing as they mostly

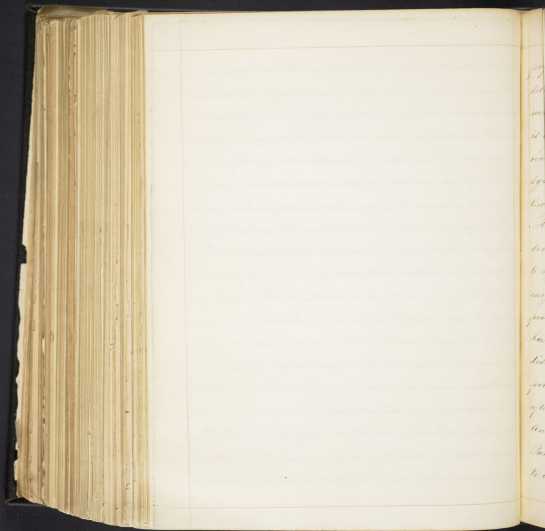




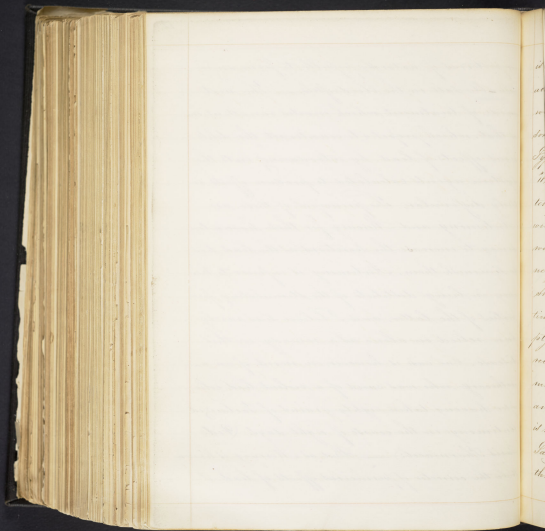
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did in the attack in spirit, an attempt was  
made to turn the position, and a bombard-  
ment of enemity was commenced and perse-  
vered in, until the entrenchments were cleared  
of the enemy, in other words until the bowels  
yielded their contents, these means were assisted  
by the warm bath and other adjuvants; but in  
general proved a very precarious Method of  
cure, as the constipation even when seemingly  
overcome, speedily returned to the great dis-  
tress of the patient, and discomfiture of the  
physician. — Although in a general way, I  
feel disposed to consider the purging plan of  
treatment, as insufficient to the cure of Lead  
Poison. I do not condemn it in all its forms.  
Two cases have lately been published of cure, ef-  
fected by means of stupor of Tobacco and Castor  
Oil, these however, are in all probability, subject  
ed of other properties besides their purgative



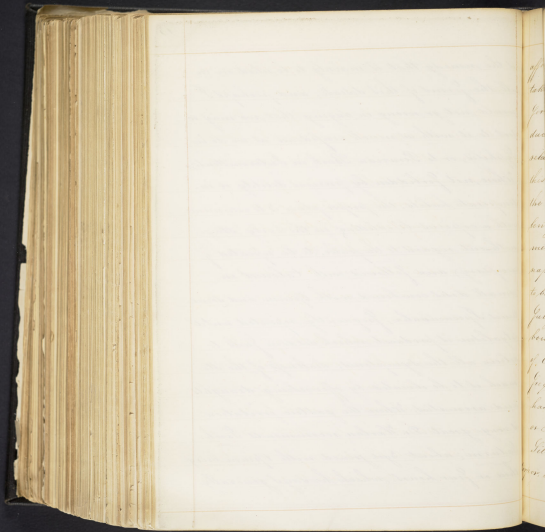
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sued. Another plan of treating this disease, I found  
did I believe upon the suggestions of Cujila, it to  
introduce into the system certain substances  
with a view to their chemical decomposition,  
and the formation of insoluble salts of Lead.  
M. Cujila made some experiments upon  
dogs, to whom he gave Carbonate of Lead until  
it produced colic, and then administered  
large doses of Sulphate of Magnesia. The  
dogs died, notwithstanding Sulphate of Lead  
was found in their intestines. It would ap-  
pear to me that this mode of treatment was  
totally insufficient to the end proposed, for  
if the offending matter exist only in the in-  
testines, and its presence is essential to the  
continuance of the disease, it can be removed  
by purgatives; and if it be supposed that lead  
in a state of solution may enter the circula-  
tion and keep up disease, it would be highly



supposed to be naturally capable, to form an insoluble salt in the blood vessels. — The next mode of treatment which invites our attention is that, which, proposed to counteract the deleterious effects of lead, by introducing into the system agents calculated to produce effects entirely dissimilar. The principal of these are Antimony and Mercury for these have a tendency to increase the secretions as the lead had to diminish them. Antimony is inferior to mercury in being destitute of the stimulating properties of the latter, and I believe had rarely been relied on alone as a remedy in this disease. One case is, however, on record of an apothecary who was cured of a violent lead colic, after having taken eighty grains of tartarized Antimony in the course of eight days. (Vide Paris Pharmacol.) — But as Mercury is known to be the corrector of pernicious effects of lead, it

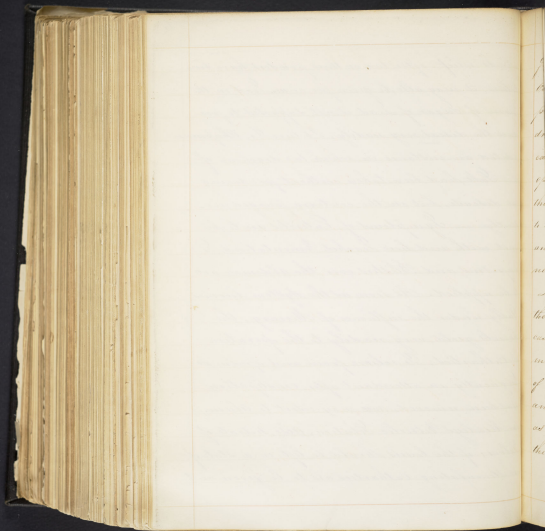


is the remedy that is mainly to be relied on in all the forms of this disease, and perhaps I would not go wrong in saying that, we may resort to it with as much confidence as we do in Syphilis, or to Peruvian Bark in Intermittents; where, not forbidden by previous debility or intemperate habits, the proper plan is to commence with a copious bloodletting in the early stage without regard to the pulse, to be repeated if necessary, and followed with Calomel in small doses combined with Opium and sometimes Ipecacuanha, frequently repeated until ptyalism is produced which seldom fails to relieve all the symptoms; bleeding of the stomach it to be obtained by effervescing draughts and aromatics, where the gastric irritation is very great Dr. Haslam recommends *Loach's Saturni*, about 3grs joined with Opium every three or four hours, which he says generally





affords relief after two or three powders have been taken, it may also be given per anum. Lead in the form of Sugar of Lead is not supposed to produce the disease very readily; Pelvie Dr. Chapman related an instance in which two drachms of this Salt had been taken without producing the disease, but on the contrary, surged violently. — Symptoms of Enteritis are to be met with and here Leeches, Emollients, &c. rapidus and Blisters over the abdomen are to be applied. As soon as the system becomes fully under the influence of Mercury, the bowels yield very readily to the operation of Cathartics. To relieve pain and spasm so frequently an attendant after constipation has been removed, we may resort to Opium, or Messey's Vitriolic Solution, also, Nitrate of Silver; if the bowels should be left in a state of Torpor, stimulating Cathartics are to be given and



for this purpose there is nothing better than  
 Cloven Nicotia and Lst. Turbith, in the  
 proportion of half an ounce of the former to a  
 drachm of the latter;— if dangerous hyper-  
 catharsis follow the exhibition of purgatives,  
 opiates are to be given. When the disease attacks  
 the head, we must resort to cupping, a blister  
 to the back of the neck, Sinapisms to the feet,  
 and Calomel and Opium given in such a man-  
 ner as to effect stypation as speedily as possible.  
 Lastly, When it terminates in paralysis of  
 the extremities— Which is I believe seldom the  
 case, under the Mercurial Practice— the treat-  
 ment is, opening caustic issues on each side  
 of the nape of the neck, stimulating frictions,  
 and purging medicines long persisted in;  
 as advised by Dr. Physick. In addition to  
 this we may use the Hygelmus.

